

Industrial Storm Water General Permit Workshop

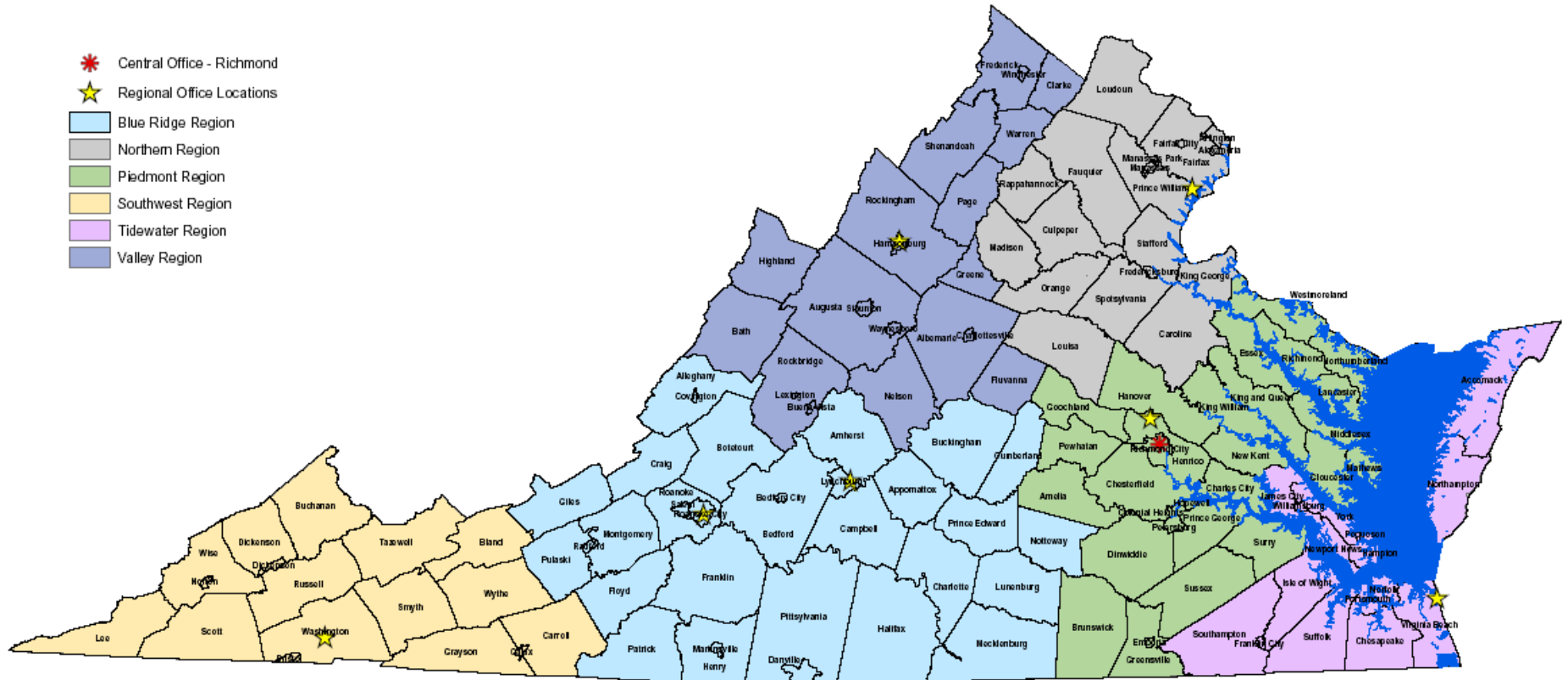
Virginia Department of Environmental Quality
Northern Regional Office
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Introductions

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Virginia Department of Environmental Quality

Regional Offices



0 25 50 100 Miles



Agenda

- Key Permit Points
- Background on TMDLs
- Compliance Inspections and Sampling
- Reporting and Points Assessment
- Enforcement Process
- Break
- Break Out Sessions

Permitting

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Key Permit Points

- Storm Water Discharges Only
- Storm Water Monitoring
- Chesapeake Bay TMDL Monitoring
- Municipal Separate Storm Sewer System (MS4)

Storm Water General Permit (SWGP)

- For storm water discharges only
- Some non-storm water discharges are authorized (Part I.B.1)
- As a general rule, if it's not rain or snow melt it shouldn't be going out your outfall

Storm Water Monitoring

Types of storm water monitoring

- Quarterly visuals
- Benchmark
- Effluent Limitation
- Impaired Waters
- Total Maximum Daily Load (TMDL)

Quarterly Visuals

(Part I.A.1.a)

- Conducted once per calendar quarter
- During normal working hours
- Document examination in accordance with your permit and maintain on site with your Storm Water Pollution Prevention Plan (SWP3)
- Does not have to be submitted to DEQ

Benchmark Monitoring

(Part I.A.1.b)

- Conducted on a semi-annual basis
 - January 1 – June 30
 - July 1 – December 31
- During “normal working hours” not applicable
- Values that exceed a benchmark concentration are not permit violations
 - Requires a review of SWP3 and best management practices
 - Document, maintain with SWP3, and sign in accordance with Part II.K
- Results of monitoring submitted to DEQ on the Discharge Monitoring Report (DMR) form

Chesapeake Bay TMDL

(Part I.B.7)

- All SWGP holders within the Chesapeake Bay watershed are required to test for Total Nitrogen (TN), Total Phosphorus (TP), and Total Suspended Solids (TSS)
- Conducted on a semi-annual basis for the first four monitoring periods of permit coverage
 - January 1 – June 30
 - July 1 – December 31
- During “normal working hours” not applicable
- Results of monitoring submitted to DEQ on the DMR

Chesapeake Bay TMDL

(Part I.B.7)

- After four monitoring periods you must calculate your facility's loadings (that is what your facility is contributing)
- Loadings must be individually calculated for TN, TP, and TSS
- DEQ is developing a calculation tool which will also allow you to submit loading data to us
- Compare your facility's loadings to those provided in the permit (Part I.B.7.b.3)
- If your facility's loadings are greater than those noted in the permit, you must develop a Chesapeake Bay TMDL Action Plan

Municipal Separate Storm Sewer System (MS4)

What is a MS4 system?

- A storm water conveyance or system of conveyances that is:
 - Owned by a state, city, town, village, or other public entity that discharges to surface waters;
 - Not a combined sewer (that is a system that carries both storm water and sewage); and
 - Not part of a Publicly Owned Wastewater Treatment Works (sewage treatment plant).
- A MS4 includes roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains.

MS4



MS4






MS4

Types of MS4 Permits

- Phase I
 - Serve populations greater than 100,000 as of the 1990 census
 - In Northern Virginia there are three Phase I MS4 operators:
Arlington County, Fairfax County, and Prince William County
- Phase II
 - Smaller than a Phase I MS4 and are located in “urbanized areas”
 - In Northern Virginia there are 32 Phase II permittees

Northern Regional MS4



-  NRO
-  Phase I
-  Phase II

DEQ recommends you contact your respective locality to determine if you discharge to their MS4 system.

MS4

Why is this important to the SWGP holder?

- Discharge Monitoring Reports (DMR) to MS4 operator (Part I.A.2.5.b)
- In addition to the requirements in this permit, if notified by a MS4 operator that the locality has adopted ordinances to meet the Chesapeake Bay TMDL, the facility shall incorporate measures and controls in your SWP3 to comply with applicable local TMDL ordinance requirements (Part I.B.8)
- Notification to the operator (Part I.B.13)

TMDLs

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What is a TMDL?

Total Maximum Daily Load

- A TMDL is the total amount of a certain pollutant that a water body can receive without exceeding water quality standards
- $TMDL = \text{Sum of WLA} + \text{Sum of LA} + MOS$

Where:

WLA = Waste Load Allocation (Point Sources)

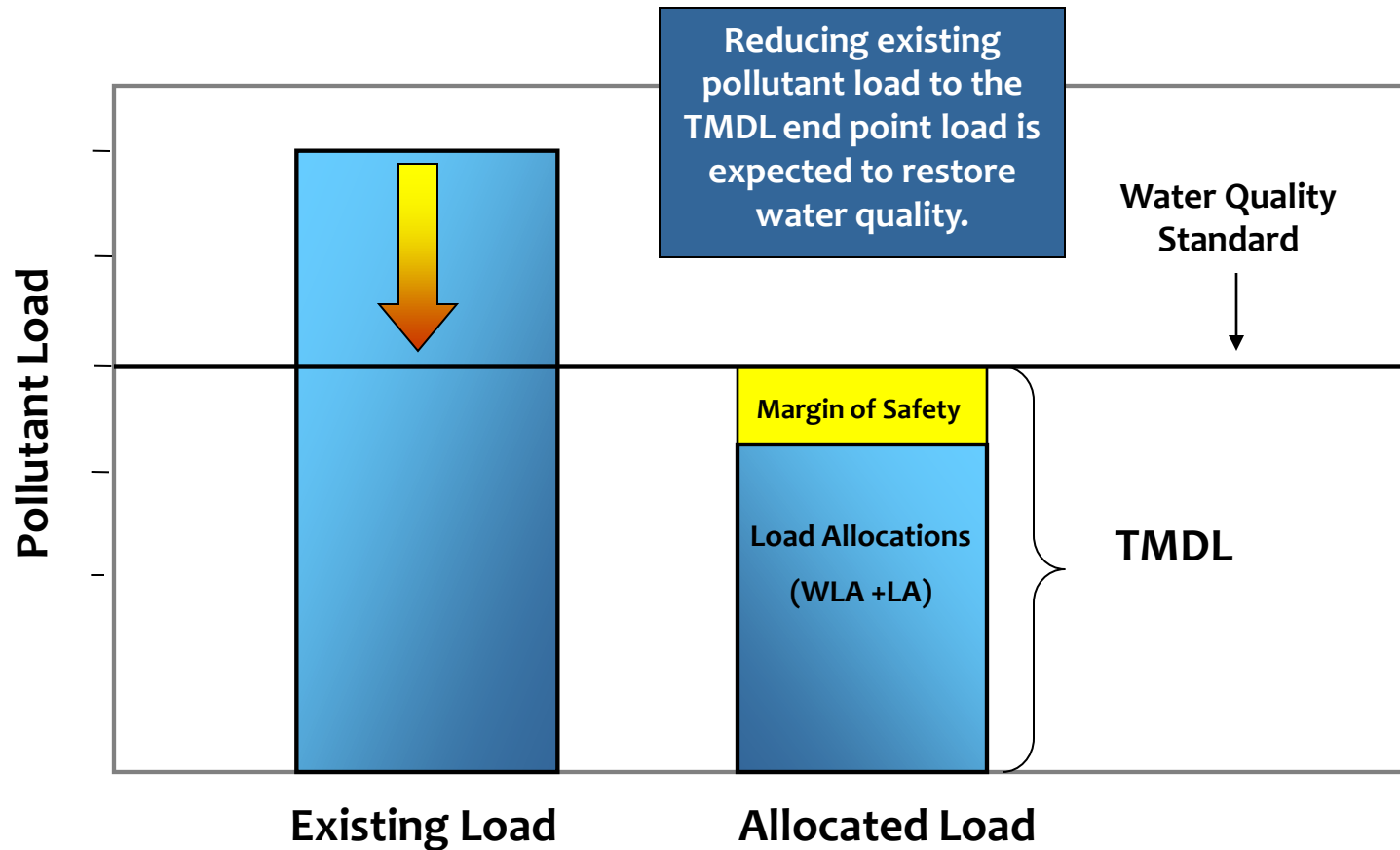
LA = Load Allocation (Non-point Sources)

MOS = Margin of Safety (Implicit or Explicit)

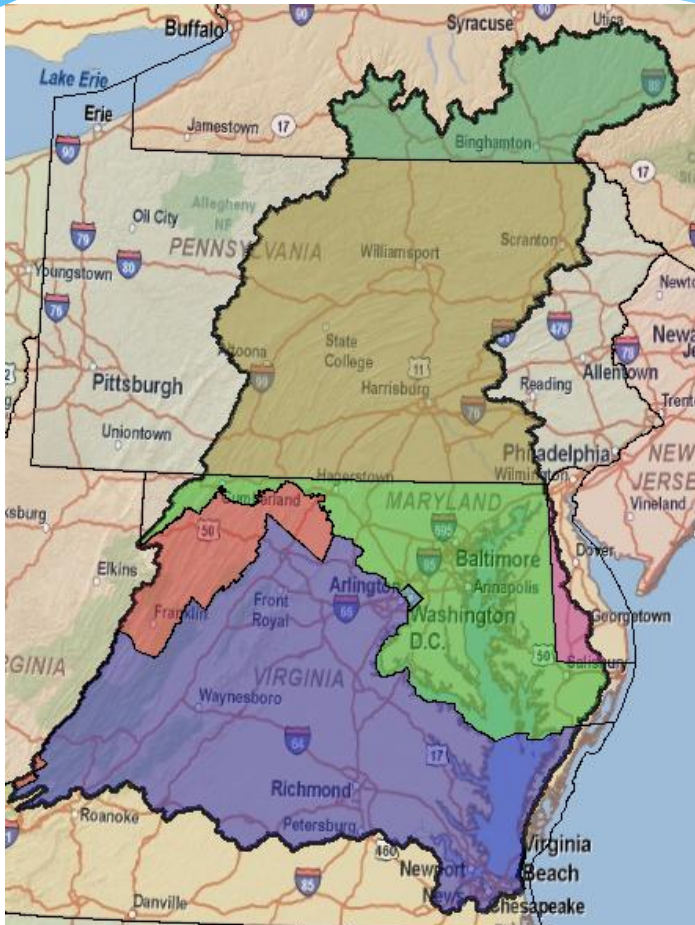
Why do we develop TMDLs?

- TMDL studies are required by law:
 - 1972 Clean Water Act
 - 1997 Water Quality Monitoring Information and Restoration Act
- Waterbodies are assessed every two years – monitoring results are compared to numerical water quality standards
- A TMDL must be developed if a waterbody is listed as *impaired* for any of its designated uses
 - Recreation
 - Wildlife
 - Aquatic Life
 - Public Water Supply
 - Fish Consumption
 - Shellfish

An Example TMDL

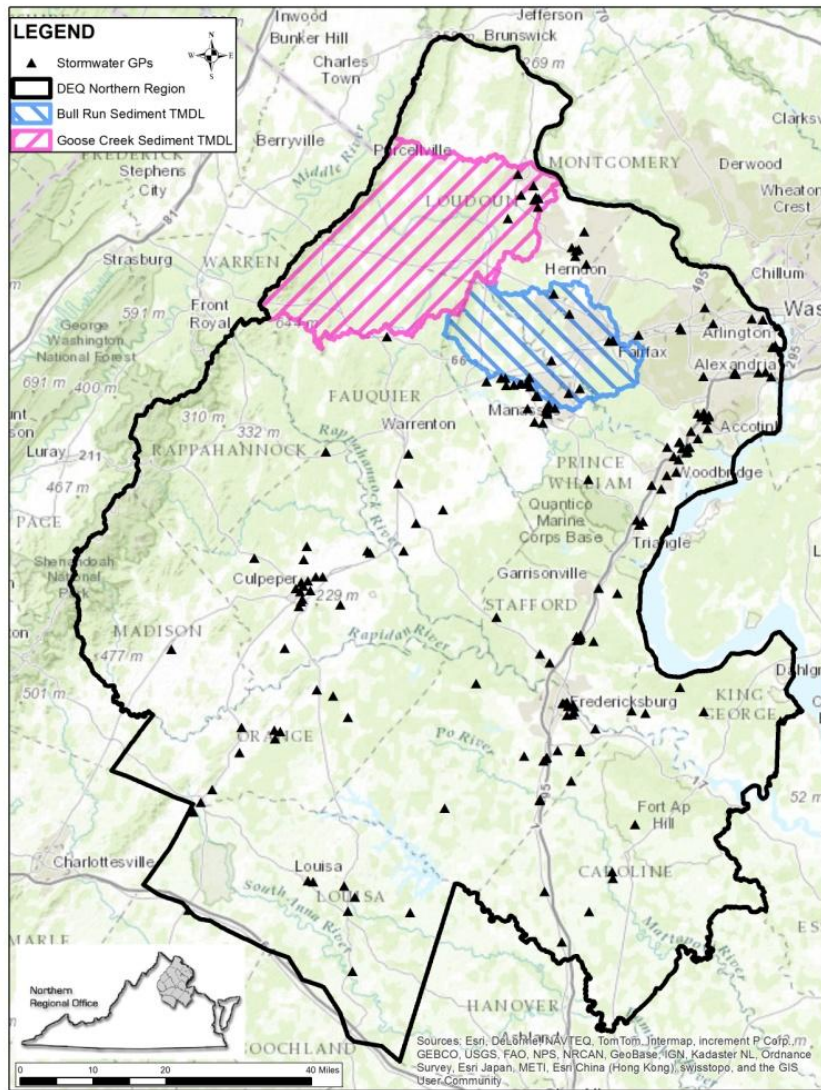


Chesapeake Bay TMDL



- December 29, 2010
- Includes six states and D.C.
 - 64,000 square miles
 - 92 TMDLs for tidal segments
- Pollutants causing impairment:
 - Nitrogen
 - Phosphorus
 - Sediment

Stormwater GPs and Local TMDLs



Applicable Uses and Pollutants:

- Aquatic Life Use
 - Bull Run Sediment TMDL
 - Goose Creek Sediment TMDL

Compliance Inspections

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Compliance Inspections

- Are typically conducted unannounced
- Have two key components
 - Paperwork review
 - Field review

Compliance Inspections

(Paperwork Review – Part III and Part IV)

- Storm Water Pollution Prevention Plan (Part III.B)
- Employee Training (Part III.B.4.a.6)
 - Facility shall implement a storm water training program for employees
 - Refer to Part IV of permit for sector specific training requirements
 - Document all training sessions and those in attendance
- Routine facility inspections (Part III.B.5)
 - Quarterly unless specified elsewhere in permit
 - Refer to Part IV of permit to see if more stringent inspections are required
 - At least one inspection shall be conducted during a period when there is a storm water discharge

Compliance Inspections

(Paperwork Review – Part III and Part IV)

- Non-Storm Water Certification (Part III.D.2)
 - Required annually
- Comprehensive Site Compliance Evaluation (Part III.E)
 - Required annually
- Review of DMR data
 - To include certificates of analysis and chain of custody

Compliance Inspections (Field Review)

- Housekeeping
- Fueling locations
- Maintenance areas
- Loading and unloading areas
- Outfalls
- If DEQ notes a discharge not authorized by the permit we will evaluate and notify the MS4 operator if applicable

Compliance Inspections

So how do you survive a compliance inspection?

- Have all required documentation available
- Know where your outfalls are located
- Document, document, document
- Contact us at any time if you have questions

Compliance Inspections

<u>Beth Biller</u>	<u>Susan Mackert</u>
Caroline	Alexandria
Fauquier	Arlington
Fredericksburg	Culpeper
Loudoun	Fairfax
Orange	King George
Prince William	Louisa
Stafford	Madison
	Spotsylvania

Sampling

- Contact a commercial laboratory early in monitoring period to ensure you have the appropriate sample containers
 - ⚠ Caution – some samples may require acid for preservation
- Virginia Environmental Laboratory Accreditation Program (VELAP) certified laboratory with the appropriate parameter certifications
- Sample early in the monitoring period if at all possible
- Storm water samples are grab samples that are to be taken within the first thirty minutes of discharge (up to first three hours if not practicable within thirty minutes)
- Should be representative of what is leaving your property

Sampling

A little something to pull it all together.....

Video courtesy of the Minnesota Pollution Control Agency
<http://www.youtube.com/watch?v=oWKdoncgiDw>

Reporting

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Blank DMR

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM (VPDES)
DISCHARGE MONITORING REPORT (DMR)

DEPT OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)

Northern Regional Office

13901 Crown Court

Woodbridge
(703) 583-3800

VA 22193

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM

TYPE: **STORM WATER**
XXXXX MONITORING

PERMITTEE NAME Facility Name

FACILITY NAME Facility Name
ADDRESS Facility Mailing Address
City VA Zip Code

FACILITY FACILITY Physical Address
LOCATION City VA Zip Code

CONTACT PERSON

TELEPHONE

VAR05XXXX
PERMIT NUMBER

001
OUTFALL NO.

Check One	MONITORING PERIOD						
	YEAR	MONTH	DAY	TO	YEAR	MONTH	DAY
	2014	July	1		2014	December	31
	2015	January	1		2015	June	30
	2015	July	1		2015	December	31
	2016	January	1		2016	June	30
	2016	July	1		2016	December	31
	2017	January	1		2017	June	30
	2017	July	1		2017	December	31
	2018	January	1		2018	June	30
	2018	July	1		2018	December	31
	2019	January	1		2019	June	30

PARAMETER		CONCENTRATION				NO. EX.	SAMPLE TYPE
		MINIMUM	AVERAGE	MAXIMUM	UNITS		
004 TSS	REPORTED	*****	*****				
	BENCHMARK CON	*****	*****	100	MG/L		GRAB

Comments:

STORM EVENT			
DATE	YR	MO	DAY
DURATION	HRS	MIN	
RAINFALL TOTAL (IN.)			
PRECEDING EVENT	DAYS	HRS	

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION.	PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		DATE		
	TYPED OR PRINTED NAME	SIGNATURE	YEAR	MO.	DAY

Electronic DMR (eDMR)

- Permittees can submit their semi-annual Discharge Monitoring Reports (DMRs) online as an alternative to paper form submission
- When participating in e-DMR, paper DMRs do not need to be submitted
- Attachment files can be included with e-DMR Reports
- The e-DMR system helps to streamline resources and reduce costs and improve accuracy of data to ensure better compliance monitoring
- Resources
 - 1-800 Help Telephone Line
 - Online Video Training
 - Online Facility Package for e-DMR Registration
 - Online User's Guide
 - Online FAQs

Discharge Monitoring Report (DMR) Data Entry

- DMRs should be completed and submitted by January 10th and July 10th
- Every page of the DMR should have an original signature and date
- Revisions are requested for missing / incomplete / incorrect DMRs (no correction fluid/tape)
- “No Discharge” DMRs are not considered valid until the end of a monitoring period

DMR Data Entry

All Industrial Storm Water DMRs should have:

- Monitoring period designated
- Numeric data entered in REPORTED row blank fields
- Numeric data expressed in limit UNITS (converted units of measure as needed)
- Number of Excursions (NO. EX.) entered
 - 0 – no exceedance
 - 1 – exceedance
- Actual Sample Type taken at discharge point
 - No puddle/pond sampling
- Storm Event Information complete and in units required
 - “DURATION” should be expressed as 2 Hours rather than >120 Minutes
 - “PRECEDING EVENT” should be expressed by 3 Days rather than >72 Hours

DMR Data Entry

- Effluent Limitation DMRs
 - If there is only 1 sample collected during the monitoring period, pH CONCMIN and CONCMAX will have the same data, other parameters CONCAVG and CONCMAX will have the same data
- Benchmark DMRs
 - DMR should be submitted for a representative sampled outfall with significantly identical outfall numbers noted in the comment field
- Chesapeake Bay TMDL DMRs
 - Chesapeake Bay parameters are to be reported for 4 semi-annual monitoring periods

Potential Violation Points

Assessment 101

- Noncompliance is evaluated based on DMRs, Required Reports, Permit Deficiencies, Inspection Deficiencies, Enforcement Orders and other facility required responses
- Only Effluent Limitation DMRs and reported data are assessed points (partial & whole) for numeric exceedances
- All DMRs are assessed points for missing data, incomplete information, non submission, and invalid data
 - Example: no or incorrect preservation, sample analyzed past holding time, non-approved analytical method, not using a VELAP Certified Lab for each parameter
- Points (partial & whole) are monitored for a rolling 6-period reporting window (6 semi-annual periods, etc.)

Potential Violation Points Assessment 101

- For accumulation of 1.0 point a Warning Letter (WL) will be sent to the permittee which provides notice of a specific potential violation(s) and may request a written response identifying the problem and how it is being corrected
- For accumulation of 4.0 points within a 6-period reporting window a Notice of Violation (NOV) will be sent to the permittee
 - The first NOV issued is the Referral NOV (to Enforcement)
 - After Referral, NOVs shall be issued for continuing potential violations which resulted in the referral or for new potential violations, as long as the total monthly points assessed equal at least one (1.0) point

Enforcement

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You received a NOV, now what??

- Stay calm
- Call or e-mail the contact listed on the NOV
- Gather necessary information for a response
- Attend a meeting with DEQ to discuss circumstances of alleged violations and potential resolutions

Enforcement Purposes and Goals

- Protect human health and environment
- Bring party into compliance
- Require appropriate remedial measures
- Deter future violations
- Ensure an economic “level playing field”

Where to find more info?

- Enforcement Manual

<http://www.deq.virginia.gov/Programs/Enforement/Laws,Regulations,Guidance.aspx>

- Consent Orders

<http://www.deq.virginia.gov/Programs/Enforcement/FinalOrders/FinalOrdersNorthernRegion.aspx>



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Thank you!